## ABSTRACT OF THE DISCLOSURE

A wireless transmission system which adaptively selects a plurality of modulation schemes according to variations in a propagation path characteristic, capable of estimating the demodulation scheme of a received signal more easily with a substantially simple configuration. This system adds priority order to demodulation schemes to be candidates for demodulation scheme estimation processing, carries out estimation processing on demodulation schemes one by one in descending order of priority and confirms the demodulation scheme of the received signal when predetermined likelihood is obtained.

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